

Statistical Process Control “SPC”

Objectives:

The Objective of this course is to assist companies in the strategic planning and preparation phases of successfully implementing SPC” Statistical Process Control” in any process or product line.

This intensive Five days SPC training course will enable delegates to understand:

- Set up a variable and attribute control chart.
- Select the proper type of control chart for the process.
- Understand the differences between a variety of variables control charts and understand which chart is used when.
- Conduct a full process capability study Identification and evaluation of potential solutions
- Establishing ongoing process control and improvement

Contents:

Day 1: Introduction to Continuous Improvement

- Foundations for Successful Continuous Improvement
- Identifying Key Process Variables & Product Attributes
- Deming’s Views and Influences

Introduction to Statistical Process Control (SPC)

- Definition of SPC
- The Engineering Concept of Variation

Day 2: Understanding Natural Variation

- Deming’s Cycle
- The Basic Idea of the Shewart Control

- Sources of Variation

Control Charts in Manufacturing

- Sampling Manufacturing Processes
- Measurement Data
- Attribute Data

Day 3: Central Tendency Measures

- Statistics that Measure Location
 - Average, Median and Mode
- Statistics that Measure Dispersion of Variation
 - Range, Sample Variance and Sample Standard Deviation

Statistics and Math Review

- The Central Limit Theorem
- Graphical Summaries

Day 4: Control Charts for Measurement Data

- Control Charts without Sub grouping
X-Individual and Moving Range Charts - Example of X-Individual and Moving Range Chart
- Control Charts with Sub grouping
X-bar and R Chart - Example of X-Bar and R Chart. X-bar and s Charts

: Control Charts for Attribute Data

- Charts for Nonconforming Units
np Chart - p Chart
- Charts for Nonconformities
c Chart – u Chart

Day 5: Analyzing “Special-Cause” Variation

- Pareto Chart
- “Fish-Bone” or Ishikawa Diagram

: Process Capability

- Definition
- Examples

Target group:

This course is designed for general managers, production and quality managers, supervisors and any possible member of continual improvement projects In general, organizations at any level.

A bachelor degree in business or engineering is required for participating in this course.

Language:

- The materials for the trainees will be in English.
- The language of instruction will be in Arabic / English.